



News Release

Defense Advanced Research Projects Agency

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IMMEDIATE RELEASE

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DARPA BEGINS MOBILE NETWORKED MULTIPLE-INPUT MULTIPLE-OUTPUT PROGRAM

The Defense Advanced Research Projects Agency (DARPA) has kicked off the first phase of the Mobile Networked Multiple-Input, Multiple-Output (MNM) program to develop technologies to enable spectrally efficient, mobile ad hoc network communications as part of DARPA's continuing Future Combat Systems supporting technologies effort.

Lucent Technologies, Whippany, N.J., received a \$11.5 million contract as the prime contractor for this phase. Subcontractors include BBN Technologies, Cambridge, Mass.; Rockwell-Collins, Cedar Rapids, Iowa; Boeing, Anaheim, Calif.; Lockheed-Martin, Moorestown, N.J. and Gaithersburg, Md.; Stow Research LLC, Flanders, N.J.; and Stevens Institute of Technology, Hoboken, N.J.

Future U. S. military operational concepts call for increased amounts of bandwidth, especially in challenging multipath environments in frequency bands that are already spectrum-limited. Multiple-input, multiple-output (MIMO) technology offers the potential for increased spectrum efficiency in such environments while also maintaining anti-jam and low probability of detection properties in mobile ad hoc networks. The MNM program will provide significant advancements in spectrum efficiency and data rate, thereby greatly increasing warfighters' capabilities. The overall program goal of the MNM program is to perform a field demonstration showing a 20 times increase in spectral efficiency while operating at multiple frequency bands in a mobile ad hoc network in an urban setting.

The MNM program's initial 12-month phase will validate the concept of a mobile ad hoc network using a MIMO physical layer. Lucent Technologies, as the MNM Phase 1 prime contractor, will develop and build the media access control and physical layers and perform a 20-node mobile ad hoc network field demonstration at the Naval Air Engineering Station, Lakehurst, N.J., in the fall of 2004.

The MNM program plans a subsequent follow on phase and will solicit future industry participation based on successful completion of this first 12-month effort.

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